CTJ w/o ORIGINAL

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF TEXAS
FORT WORTH DIVISION

HENRY LEE SIMS, JR., *et al*	§	
	§	
Plaintiffs,	§	
	§	
VS.	§	**CASE NO. 4:14-cv-00045-A**
	§	
KIA MOTORS AMERICA, INC., and KIA MOTORS CORPORATION	§	
	§	
Defendants.	§	

KIA'S MOTION TO EXCLUDE TESTIMONY OF PLAINTIFF'S EXPERT JERRY WALLINGFORD AND BRIEF IN SUPPORT

Plaintiffs have designated Jerry Wallingford to offer opinions regarding the design of the subject Kia Soul. Wallingford not only is not qualified to provide the testimony he has given but also has failed to present opinions based on more than his *ipse dixit*. First, he has offered only abstract ideas about his proposed "safer alternative designs" and about his crashworthiness claim related to the doors of the Kia Soul. Second, his opinions are not based on sufficient facts or objective underlying data. Third, Wallingford has not tested any of his proposed alternative designs as required by Texas law. Fourth, he has not established the feasibility of his "safer alternative designs." And fifth, he has not performed the required risk-utility analysis of his offered alternative designs.

In addition, although Wallingford has not been designated as a biomechanical expert, he has offered expert opinions about injury causation and other biomechanical issues relating to the design and performance of the Kia Soul. He also has offered opinions regarding fire cause and propagation—even though he denied that he would offer such opinions. Because Wallingford lacks the necessary qualifications to render biomechanical opinions or fire cause and propagation opinions, his testimony in those areas should be excluded.

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BACKGROUND

A. Subject Accident

On April 28, 2013, Henry Sims, Sr. was riding as a passenger in the backseat of a 2010 Kia Soul. When the Kia Soul entered the intersection of Jacksboro Highway and Hanger Cutoff Road, a Honda Odyssey Minivan crashed into its passenger side, causing the Soul to spin and to strike various objects, including a traffic light pole and the anchored pipe and base of a breakaway yield sign.

Figure 1. Police photograph of the yield sign base from Smith's Expert Report

When the fuel tank contacted the yield sign base and pipe, the sign base cut through the Soul's fuel tank. The Soul ultimately caught fire, and the three rear passengers, including Mr. Sims, sustained fatal injuries. Plaintiffs subsequently filed their complaint against Kia Motors America, Inc. and, later, Kia Motors Corporation, alleging the Kia Soul was defective and unreasonably dangerous.

B. Defect Allegations

Plaintiffs claim that Kia should have "take[n] reasonable steps to design and manufacture a gas tank that is not susceptible to failure in collisions and that, if fire in the gas tank does result,

the fire does not immediately explode into the passenger cabin of the vehicle."[1] Thus, their primary defect allegations involve two parts on the Kia Soul:

1. **The Fuel Tank**

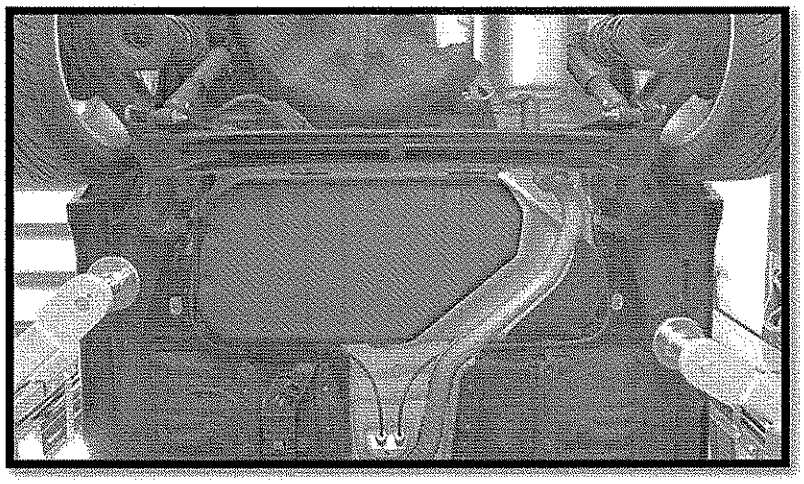

Figure 2. Photograph of exemplar Kia Soul's fuel tank taken by Greg Smith on May 10, 2013

2. **The Fuel Tank Access Cover**

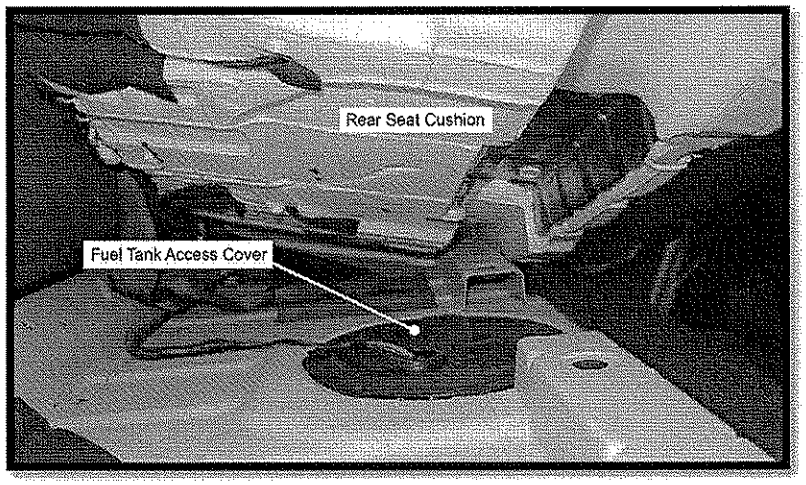

Figure 3. Photograph of fuel tank access cover in exemplar Kia Soul from Colwell's Expert Report[2]

Specifically, Plaintiffs allege that the fuel tank should have been "protected by a shield or straps" and that the fuel tank service access cover should have been "made of metal."[3]

[1] Plfs.' First Am. Compl., Ex. A, App. at 7.
[2] Colwell Report, Mar. 2, 2015, Ex. B, App. at 42.
[3] Plfs.' First Am. Compl., Ex. A, App. at 8-9.

C. Jerry Wallingford's Proposed Testimony

Plaintiffs have designated Jerry Wallingford to provide expert testimony related to the design of the subject Kia Soul. To prevail on their design defect claim, Plaintiffs must prove that (1) the product was defectively designed so as to render it unreasonably dangerous; (2) a safer alternative design existed; and (3) the defect was a producing cause of the injury for which the plaintiff seeks recovery.[4] A "safer alternative design" means a product design other than the one actually used that in reasonable probability (1) *would have prevented or significantly reduced the risk of the claimant's personal injury*, property damage, or death *without substantially impairing the product's utility* and (2) was *economically and technologically feasible* at the time the product left the control of the manufacturer or seller by the application of existing or reasonably achievable scientific knowledge.[5]

For his opinions to be admissible, Wallingford must establish—through a reliable scientific methodology utilizing sufficient facts and data—that each of his proposed "safer alternative designs" (1) would have prevented or significantly reduced Mr. Sims' injuries without substantially impairing the utility of the Kia Soul and (2) were technologically and economically feasible at the time the Kia Soul was manufactured. In his expert report and during his deposition, Wallingford purportedly offers the following "safer alternative designs":

1. Increased Ground Clearance Plus Fuel Tank Shield or Straps

One of Wallingford's proffered "safer" alternative designs is to utilize the space above the fuel tank and below the floor pan and to install fuel tank straps or a shield to prevent the tank from displacing downward. According to Wallingford, by moving the fuel tank up, the fuel

[4] *Casey v. Toyota Motor Eng'g & Mfg. N. Am., Inc.*, 770 F.3d 322, 330-31 (5th Cir. 2014). Some of the arguments in this motion cite Texas law applicable to Plaintiffs' claims. Kia continues to contend Texas law has the predominate interest in the application of its laws in the issues in this case. There is currently a motion before the Court to decide whether Texas law should apply to a number of issues in this case, including certain products liability claims at issue in this motion.

[5] Tex. Civ. Prac. & Rem. Code Ann. § 82.005(a).

tank's ground clearance would be increased by approximately two to three and a quarter inches for a total ground clearance of 10.4 inches.[6] But to prevent the interaction with the sign base, Wallingford testified that fuel tank straps or a shield were also necessary to prevent the fuel tank from deforming downward during the collision.[7]

2. Fuel Tank Shield

Wallingford has opined that the Kia Soul should have been equipped with a fuel tank shield of undetermined material or thickness placed on the front of the fuel tank.[8] A fuel tank shield, he claims, could be used in conjunction with the increased ground clearance as an alternative design.[9] Or, if the "properly designed" fuel tank shield of undetermined material and thickness (that must be developed through testing, according to Wallingford) is utilized without first increasing the Kia Soul's ground clearance, Wallingford stated that a "more substantial" shield would be required.[10]

3. Metal Access Cover

According to Wallingford, the polymer access cover should have been replaced with a metal cover to prevent fire from "immediately" traveling into the passenger compartment.[11]

Wallingford has failed to arrive at these opinions using a valid scientific methodology based on sufficient facts or data. Thus, his opinion is unreliable and must be excluded.

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[6] Wallingford Dep. 90:1-5, Ex. F, App. at 95.
[7] Wallingford admitted during his deposition that he did not reconstruct this accident and is relying on the opinions of Michael McCort. *Id.* 95:22-96:1, at 96-97. If this Court grants Defendants' motion to limit McCort's testimony, then Wallingford's testimony regarding the fuel tank defect he alleges and his proposed alternative designs must also be excluded as McCort's opinions form the basis of Wallingford's opinions regarding the events of the accident, including the downward movement of the tank.
[8] *See Id.* 140:15-20, at 107.
[9] *See Id.* 209:25-210:5, at 132-31.
[10] *Id.* 154:23-24, at 113; *accord id.* 142:1-12, at 108.
[11] *See* Wallingford Report, Jan. 29, 2015, Ex. C, App. at 76, 78.

ARGUMENT & AUTHORITIES

I. Wallingford is not qualified to testify regarding injury causation or fire-related issues.

Under Rule 702 of the Federal Rules of Evidence, only a witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise. District courts function as gatekeepers and should only permit testimony from a qualified expert to be presented to the jury.[12] District courts must be assured that the proffered witness is qualified to testify by virtue of his "knowledge, skill, experience, training, or education."[13] The burden of demonstrating an expert's qualifications rests with the party offering the expert's testimony.[14]

The fact that a person has technical knowledge in one area does not automatically qualify him as an expert in all technical fields.[15] Instead, the person must have more specific expertise and show special knowledge as to the issue upon which he proposes to express an opinion.[16] Thus, a district court should refuse to allow an expert witness to testify "if it finds that the witness is not qualified to testify in *a particular field* or on *a given subject*."[17]

A. Wallingford is not qualified to offer his proposed testimony regarding fire-related issues.

Wallingford has opined that Kia should have utilized a metal fuel tank access cover in order to slow the progression of fire into the rear passenger cabin. Wallingford, however, is not qualified as an expert to testify regarding fire propagation, fire paths or times, burn pattern analysis, fire investigation, or combustibility of automotive materials. Wallingford has a

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[12] *See Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 590-93 (1993).
[13] Fed. R. Evid. 702.
[14] *Falcon v. State Farm Lloyds*, No. 1:12-CV-491-DAE, 2014 WL 2711849, at *10 (W.D. Tex. June 16, 2014).
[15] *Cf. Kallassy v. Cirrus Design Corp.*, No. CIV.A. 3:04-CV-0727N, 2006 WL 1489248, at *7 (N.D. Tex. May 30, 2006), *aff'd*, 265 F. App'x 165 (5th Cir. 2008) ("A doctor does not qualify as an expert in all medicine just because the doctor qualifies as an expert in one medical field.").
[16] *See id.*
[17] *Wilson v. Woods*, 163 F.3d 935, 937 (5th Cir. 1999) (emphasis added).

bachelor of science in mechanical engineering.[18] He has never taken a college-level course specifically on the subject of combustion.[19] He is not a certified fire or explosion investigator.[20] He is not a member of the National Fire Protection Association, the National Association of Fire Investigators, or the International Association of Arson Investigators.[21] He has never written any peer reviewed or published articles on fire propagation, fire paths or times, burn pattern analysis, fire investigation, or combustibility of automotive materials.[22] He has never taught a course on fire investigation.[23] In fact, Wallingford admitted during his deposition that he is not an expert on the subjects of fire propagation, timing and travel analysis of fires into motor vehicles, or fire pattern analysis.[24]

Yet, in his report and during his deposition, Wallingford offered opinions regarding these very subjects:

- "[T]he polymer service cover above the fuel tank mounted in the vehicle floorpan was completely missing and *consumed by the fire*. The polymer service cover located under the rear seat of the subject 2010 Kia Soul *allowed fire to enter* the occupant compartment *within a short period of time*."[25]

- "The decision to use a thin piece of polymer as a maintenance cover to separate the top of the fuel tank and the passengers seated in the rear seat of the vehicle is one glaring example. Reasonable engineering principles dictate that if a pathway between the vehicle's fuel tank and the inside of the passenger cabin is created, an automaker should, at a minimum, take steps to ensure that a fuel fire could not *immediately* enter into the passenger cabin if one should occur.

  Here, the Kia defendants elected to utilize a *piece of combustible polymer* for access to the fuel tank fuel pump module and to act as the barrier between the vehicle's fuel tank and the inside of the car. *The polymer is not designed to be fire resistant.* That decision was extremely dangerous, resulting in another defect to the 20 10 Kia Soul.

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[18] Wallingford Dep. 167:1-3, Ex. F, App. at 122.
[19] *Id.* 167:19-24, at 122.
[20] *Id.* 169:2-4, at 124.
[21] *Id.* 168:18-169:4, at 124-25.
[22] *Id.* 169:21-170:4, at 124-25; *id.* 171:7-13, at 126.
[23] *Id.* 169:18-20, at 124.
[24] *Id.* 170:8-25, at 125.
[25] Wallingford Report, Ex. C, App. at 61 (emphasis added).

After reviewing the subject vehicle, it is clear that *the fuel tank service cover used on the 2010 Kia Soul did not withstand the vehicle fire, meaning that the fire intruded beneath rear seat where Mr. Sims was seated.* Therefore, the use of a polymer fuel tank service cover on the 2010 Kia Soul contributed, at least in part, to the injuries sustained by Mr. Sims."[26]

- "Had Kia used a metallic fuel tank service cover on the 2010 Kia Soul it would have *effectively withstood the vehicle fire*, meaning *that the fire would not have intruded beneath rear seat where Mr. Sims was seated.* Therefore, the use of a polymer fuel tank service cover on the 2010 Kia Soul contributed, at least in part, to the injuries sustained by Mr. Sims."[27]

- "With the vehicle on the ground, I don't have a lot of oxygen underneath it. I don't have a lot of space above the top of the tank, but I do have some, as much as three-plus inches above the tank so first I have to melt that with a fire that's lapping from underneath the vehicle in which all the people are indicating that is happening relatively quickly; then when I melt that, then I have a compromise burn the foam material on the rear seat cushion initially for that to occur, but once that begins, then I have a rolling smoke somewhat toxic material coming through that -- that hole adding to the rest of the fire. I cannot give you a time line on how long that would take."[28]

- "I believe [the fire] *developed from the outside* and I believe *it's developing in the middle above the fuel tank* as that *polymer seal collapses and the fire comes through it.*"[29]

- "I'm of the opinion that *the fire would not have moved in as fast* by a very small degree" if a metal service access cover was used."[30]

- "Well, given enough time and the fire burned on, we still would have had three dead people in the back and the vehicle would have been totally consumed, yes, but *how quickly the fire moved in, to what degree [the cover] burned, it may have made some difference . . . .*"[31]

- "I believe that the *patterns show the oxidation*, that *there was a substantial fire at that particular point in time*, and just like Jeff I cannot tell exactly when that occurred, but at some point in time that did occur that there was a compromise and *a burn-through of the fuel tank access cover.*"[32]

The fact that Wallingford holds himself out as a safety engineer does not mean that he is an expert in the specific fields of fire propagation, burn pattern analysis, combustibility, or any

[26] *Id.* at 76 (emphasis added).
[27] *Id.* at 81 (emphasis added).
[28] Wallingford Dep. 122:7-19, Ex. F, App. at 104.
[29] *Id.* 124:1-5, at 106 (emphasis added).
[30] *Id.* 161:3-4, at 119 (emphasis added).
[31] *Id.* 203:10-14, at 128 (emphasis added).
[32] *Id.* 212:14-20, at 132 (emphasis added).

other fire-related issue in this case. He has no specific education, training, or experience that sets him apart as an expert, and Plaintiffs have offered no evidence otherwise. Wallingford himself admits that he is not an expert on the subjects of fire propagation, timing and travel analysis of fires into motor vehicles, or fire pattern analysis.[33] Thus, Wallingford is not qualified to testify about fire-related issues in this case, including the progression of the fire into the vehicle, the burning of the access service cover, and any proposed alternative designs that somehow might alter fire propagation.

B. Wallingford is not qualified to offer testimony regarding injuries sustained by the vehicle occupants, how the injuries were sustained, or the effect of those injuries. His off-hand comments should be excluded.

Although Wallingford stated during his deposition that he was not going to give opinions related to injury causation or biomechanics,[34] Wallingford has offered comments regarding the survivability of the collision and the occupants' post-collision injuries. Specifically, he stated the following in his expert report:

- "Mr. Sims, and two other passengers riding in the rear seat of the Kia Soul[,] were trapped in the vehicle after the crash and *died from fire-related injuries*."[35]
- "The evidence here shows that, *despite surviving the collision* with the Honda Odyssey, Mr. Sims was unable to escape the vehicle before it was consumed by the fire."[36]
- "Given the *lack of serious injuries sustained* by any of the surviving passengers of the two vehicles involved in the crash, it is *unlikely that Mr. Sims sustained serious injury* related to the collision."[37]

Then, during his deposition, Wallingford added more speculation about the reasons various occupants died after the crash.[38] Moreover, in order to support the crashworthiness claim (to be

[33] *Id.* 170:8-25, at 125.
[34] *Id.* 96:2-16, at 97.
[35] Wallingford Report, Ex. C, App. at 52 (emphasis added).
[36] *Id.* at 77 (emphasis added).
[37] *Id.* (emphasis added).
[38] *See, e.g.*, Wallingford Dep. 158:20-22, Ex. F, App. at 116; *id.* 159:19-24, at 117; *id.* 118:12-16, at 101; *id.* 118:20-119:3, 101-02.

discussed in the proceeding sections), Wallingford *must* testify that a defect in the design of the doors was a but-for cause of Plaintiffs' enhanced or additional injuries, rather than speculate about whether or not the injuries occurred due to some unknown problem with the car.

For Wallingford's opinions related to the vehicle occupants' injuries and Mr. Sims' cause of death to be admitted, the opinion must have a reliable basis in the knowledge and experience of Wallingford's discipline.[39] Wallingford is not qualified on biomechanics/injury causation analysis. Although he may be familiar with fire-related injuries, Wallingford does not have a medical degree or medical training. He is not formally trained in biomechanical, biomedical, or health care fields, and Plaintiffs have not provided any evidence that he has the appropriate knowledge or training. Wallingford is, therefore, not qualified to testify about the injuries the vehicle occupants sustained, the severity of these injuries, the cause of the injuries or deaths, the enhancement of these injuries, or the survivability of the accident.[40] Finally, despite his comments, he has conceded he actually has no opinions on escape time[41] or cause of death, time of post-crash survival, occupant kinematics, injury analysis, or injury mechanism.[42]

II. Wallingford's "safer alternative design" opinions are unreliable and must be excluded.

Before Wallingford can offer expert opinion testimony at trial, the Court must determine if his opinions are reliable and relevant. Baseless, unreliable evidence is of no assistance to the trier of fact and, thus, is inadmissible.[43] The reliability determination is made by examining whether Wallingford arrived at his opinions by a reliable, scientific methodology similar to that

[39] *Daubert*, 509 U.S. at 592
[40] *Falcon*, 2014 WL 2711849, at *20; *see also King v. Synthes (U.S.A.)*, 532 F. Supp. 2d 828, 832 (S.D. Miss. 2006).
[41] Wallingford Dep. 116: 3-7, Ex. F, App. at 100.
[42] *Id.* 96:14-16, at 97.
[43] *See, e.g.*, *Viterbo v. Dow Chern. Co.*, 826 F.2d 420, 421 (5th Cir. 1987) ("If an opinion is fundamentally unsupported, then it offers no expert assistance to the jury.").

used by persons outside the context of litigation.[44] To determine if a valid scientific methodology was used, courts may consider the following factors: (1) whether a theory can be (and has been) tested; (2) whether the theory has been subjected to peer review and publication; and (3) whether the theory enjoys general acceptance within a relevant scientific community.[45] The proponent of the expert testimony must prove by a preponderance of the evidence that the testimony is reliable.[46]

Under this analysis, expert testimony is unreliable if it is not grounded "in the methods and procedures of science" and is no more than "subjective belief or unsupported speculation."[47] In other words, the opinion must be based on more than the expert's *ipse dixit*—it is so simply because "an expert says it is so."[48] Wallingford's testimony that a safer alternative design existed that would have prevented Mr. Sims' injuries is based solely on his *ipse dixit* and unsupported speculation. It is, therefore, unreliable.[49]

A. Wallingford did not utilize a reliable methodology in developing his fuel tank shield alternative design opinions.

In cases involving design defect claims, "the proper methodology for proposing alternative designs includes more than just conceptualizing possibilities."[50] Instead, an expert must present a *specific* design for his proposed safer alternative design.[51] If an expert fails to present a specific design, he cannot establish that his proposal was economically and technologically feasible or that the proposal would have prevented the alleged injuries without

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[44] *Kumho Tire Co. v. Carmichael*, 526 U.S. 137 (1999)
[45] *See id.* at 147, 149; *Daubert*, 509 U.S. at 592-94.
[46] *Johnson v. Arkema, Inc.*, 685 F.3d 452, 459 (5th Cir. 2012).
[47] *See Daubert*, 509 U.S. at 590
[48] *See Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 137 (1997) ("Nothing in either Daubert or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the ipse dixit of the expert.")
[49] *See, e.g.*, *Viterbo*, 826 F.2d at 421 (finding that plaintiffs' expert testimony was unreliable because expert "brought to court little more than his credentials and a subjective opinion").
[50] *Watkins v. Telsmith, Inc.*, 121 F.3d 984, 992 (5th Cir. 1997).
[51] *Guy v. Crown Equip. Corp.*, 394 F.3d 320, 327 (5th Cir. 2004).

compromising the utility of the vehicle. And if the expert cannot reliably establish each of those elements, then under Texas law, he has not offered a "safer alternative design" and cannot be permitted to testify. Here, Wallingford has not offered any specific designs for any of his proposed alternative designs. As demonstrated below, each of Wallingford's proposed designs are simply conceptualizations of possibilities.

Wallingford has not provided Defendants with a specific, detailed design for his proposed fuel tank shield. In his expert report and during his deposition, Wallingford abstractly described potential design possibilities, but he refused to precisely explain the design of the shield he claims would have changed the outcome in this case. For example, Wallingford has refused to select the type of material that the shield should be made out of:

> A. [T]he tank . . . certainly needs to be shielded with *some sort of a polymer or metal* shield.[52]
>
> . . .
>
> Q. Do you think this vehicle should have been equipped with a polymer tank shield or a metal tank shield?
>
> A. Well, that's *somewhat up to the manufacturer* . . . .[53]
>
> . . .
>
> Q. Do you believe this tank should have had a metal shield?
>
> A. That's an option *that's up to the manufacturer*. Certainly, the metal shield offers more resistance, but it also increases the weight. . . . Some of the shields that we see are not steel, they'll be a aluminum so they can be somewhat lighter.[54]

And he has not determined the necessary thickness or the precise shape or angle of the shield required to withstand the impact with the sign base:

[52] Wallingford Dep. 64:4-6, Ex. F, App. at 93 (emphasis added).
[53] *Id.* 140:2-5, at 107 (emphasis added).
[54] *Id.* 145:10-17, at 111 (emphasis added).

> Q. What -- well, would that have eliminated the rupture of the tank in this accident or do you not know with certainty?
>
> A. I -- I think an adequately well-designed and well-developed polymer shield of *proper thickness*, and this all has to be sorted out through testing, placed on the front of the tank . . . would have prevented this tank in this accident from being compromised.[55]
>
> . . .
>
> Q. How -- well, what is the thickness of the –
>
> A. I would *start with evaluating* a quarter-inch thick HDPE tank shield.[56]
>
> . . .
>
> Q. What would be the angle of the shield at the front of the tank coming up from the -- where it covers the bottom of the tank to the angle where it is in front of the front of the tank? What would be that angle?
>
> A. . . . It -- it could have been as shallow as 15 degrees or as steep as 45 degrees. Again, it's something that I develop through a test protocol.[57]

He has not prepared any detailed designs or calculations or prepared preliminary design drawings.[58] Of note, Wallingford admitted during his deposition that the fuel tank shield pictured in his report was included in the report to depict a typical shield and that this shield would have not made a difference in this collision.[59]

Instead of providing a completed design of an end product,[60] Wallingford has only given Defendants an explanation of how he would "begin" to design the shield:

> A. I think I already gave you my -- my input as to how I would *begin* to design a shield that would be deflected and I certainly agree it's really going to be kind of

[55] *Id.* 140:12-20, at 107 (emphasis added).
[56] *Id.* 142:17-19, at 108 (emphasis added).
[57] *Id.* 143:9-21, at 109.
[58] *Bourelle v. Crown Equip. Corp.*, 220 F.3d 532, 537 (7th Cir. 2000) ("[The expert] admitted that he has not prepared 'detailed design or calculations,' performed 'an economic feasibility study,' prepared 'preliminary design drawings,' or performed 'any risk utility type testing.' The district judge stated that without such work or testing, '[t]he court can only conclude that [the expert's] opinions about an unreasonably dangerous condition in the TSP fall into the category of subjective belief or unsupported speculation.'" (second alteration in original)).
[59] Wallingford Dep. 147:10-13, Ex. F, App. at 112.
[60] *See Guy*, 394 F.3d at 327.

> difficult to stop a vehicle of this weight moving at 23 miles an hour without puncturing the fuel tank. . . .[61]

In other words, Wallingford has simply conceptualized possible fuel tank shield designs.[62] Because the proper methodology for proposing alternative designs includes more than just conceptualizing possibilities, Wallingford's testimony regarding fuel tank shields must be excluded as unreliable.

B. Wallingford's safer alternative design opinions are not based on sufficient facts or data.

1. Wallingford's fuel tank shield proposal is not based on sufficient facts or data.

Contrary to Rule 702 of the Federal Rules of Evidence, Wallingford has not relied on sufficient facts and data to develop his fuel tank shield design opinion. During his deposition, Wallingford stated that he was relying on the opinion of Plaintiffs' designated expert Michael McCort regarding the reconstruction of the accident.[63] McCort, however, has not analyzed certain aspects of the collision that are crucial to Wallingford's testimony.[64] For example, McCort admittedly did not calculate how much force it would take for the slip base to penetrate a fuel tank.[65] Consequently, Wallingford has no factual basis to state that his proposed fuel tank shield design could withstand the force of the impact with the sign base because has no understanding of the intensity of the forces to which the fuel tank was subjected. Wallingford, therefore, has not linked his conclusions to the facts of the case. His testimony should be excluded because it is based on mere speculation and because there is simply too great an analytical gap between Wallingford's fuel tank shield opinion and its bases.

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[61] Wallingford Dep. 198:2-7, Ex. F, App. at 127 (emphasis added).
[62] *See Guy*, 394 F.3d at 327.
[63] Wallingford Dep. 162:20-24, Ex. F, App. at 120.
[64] *See, e.g.*, McCort Dep. 114:18-25, April 1, 2015, Ex. D, App. at 84.
[65] *See id.*

2. Wallingford's testimony about the service access cover is not based on sufficient facts or data.

Wallingford's opinions about the consumption of the access cover and about the fire progression are not based on sufficient facts or data. Although Wallingford has testified that he believes that the fire entered the passenger compartment of the Kia Soul through the access hole, Wallingford has presented no actual evidence to support this theory. Ultimately, his testimony is he does not know what actually happened and is no expert in fire propagation. As such, Wallingford's unqualified speculation regarding how the fire spread during this accident is of no import.

Additionally, in his report, Wallingford stated that the polymer service cover was "consumed by the fire" and "allowed fire to enter the occupant compartment *within a short period of time.*"[66] As discussed previously, Wallingford is not qualified to offer this opinion. Nonetheless, Wallingford's only evidence that the polymer service cover was consumed during the fire "within a short period of time" appears to be that the cover is missing. He does not know, however, how long it took for the polymer access cover to melt or, if by the time the access cover melted, the fire was already well developed in the passenger compartment.[67] He further admitted that there were other paths for the fire to enter into the passenger compartment prior to such propagation through the service access opening.[68] In other words, he has no support for his statement that the polymer service cover allowed the fire into the passenger compartment "within a short period of time" and that a metal service cover (of undetermined material or thickness) would have slowed this progression. Wallingford's testimony about the

[66] Wallingford Report, Ex. C, App. at 61 (emphasis added).
[67] Wallingford Dep. 212:17-25, Ex. F, App. at 132.
[68] *Id.* 122:20-123:8, Ex. F, App. at 104-05.

polymer cover is, therefore, based on Wallingford's unsupported speculation instead of on any facts or data.

3. Wallingford's fuel tank straps concept is not based on sufficient facts or data.

Like his other proposed designs, Wallingford's testimony about the use of fuel tank straps on the subject Kia Soul is unreliable because his opinion is not based on sufficient facts or data. During his deposition, Wallingford testified that he did not know how far the fuel tank purportedly moved downward.[69] Although he does not know how far the fuel tank moved downward, Wallingford still testified that fuel tank straps, rather than the existing bolts, would have prevented this movement. It is unclear how Wallingford can conclude that the straps would have prevented the fuel tank from moving downward when he cannot quantify how much movement the straps were supposed to prevent. Wallingford has not provided any further explanation of his hypothesis that the straps, as opposed to bolts, would have prevented the tank from moving down an undetermined amount or otherwise altered the outcome in this case. Consequently, there is simply too great an analytical gap between Wallingford's fuel tank straps opinion and its bases for his opinion to be reliable.

C. Wallingford has not tested any of his proposed alternative designs.

The first factor mentioned by the Supreme Court in *Daubert* for determining admissibility of an expert's pinion is the extent to which the theory has been or can be tested.[70] Whether an expert's theory or conclusion can be and has been tested has been described as the "most significant *Daubert* factor," and numerous cases have held that the failure to subject an expert's proffered opinion to scientific testing justifies exclusion.[71] Moreover, valid testing is

[69] *Id.* 56:2-7, Ex. F, App. at 91.
[70] *Daubert*, 509 U.S. at 593-94.
[71] *Garcia v. BRK Brands, Inc.*, 266 F. Supp. 2d 566 (S.D. Tex. 2003); *see also Watkins*, 121 F.3d at 991-93.

critical in Texas to establish the reliability of an expert's alternative design proposals.[72] In design defect cases specifically, the Fifth Circuit has recently recognized that Texas law "*expects that an alternative design be tested* before a jury can reasonably conclude that the alternative would prevent or reduce the risk of injury."[73] Wallingford's opinions fall short of the expectations of Texas law, then, because he failed to perform *any* testing of *any* of his proposed alternative designs.

First, Wallingford's alternative design theory regarding the fuel tank shield should be excluded as unreliable because he has failed to test his hypothesis. Wallingford testified in his deposition that a "well-designed and well-developed polymer shield of proper thickness, . . . *sorted out through testing*, placed on the front of the tank . . . would have prevented this tank in this accident from being compromised."[74] When asked whether his proposed shield would have prevented the fuel tank rupture, Wallingford replied, "If properly designed, *developed through testing*, yes sir."[75] Wallingford, therefore, admitted that testing is critical to developing his alternative design, yet he *conducted no testing* of his proposed fuel tank shield as necessary to develop his opinions and to demonstrate that his proposed alternative design would have prevented Mr. Sims' injuries.[76] Because Wallingford has failed to perform scientific testing of his proposed alternative design, his testimony addressing his fuel tank shield theory is not "scientific knowledge," but rather mere "unsupported speculation," and must be excluded.[77]

[72] *Watkins*, 121 F.3d at 991-93(affirming the exclusion of an expert who had not tested or reviewed any testing of his proposed safer alternative design).
[73] *Casey*, 770 F.3d at 332 (emphasis added).
[74] Wallingford Dep. 140:15-16, Ex. F, App. at 107 (emphasis added).
[75] *Id.* 142:1-12, at 108 (emphasis added).
[76] *Id.* 111:24-25, at 99.
[77] *Garcia*, 266 F. Supp. 2d at 573.

Second, Wallingford did not conduct any testing that would allow a trier of fact to infer that a metal cover would have prevented Mr. Sims' injury.[78] In fact, when asked during his deposition whether he could render an opinion to a reasonable degree of engineering certainty that if the service access cover had been made of metal instead of plastic, the outcome here would have been different, Wallingford answered "Yes and no."[79] Part of the problem, of course, is that Wallingford did not investigate when the fire actually entered the occupant compartment.[80] Further, Wallingford conducted no testing or any other analysis to confirm his opinion that the fire spread through the access hole as quickly as he says it did.[81] It is, therefore, unclear on what basis he can opine that a metal service cover would have slowed the fire progression more than the polymer cover when Wallingford does not know how long it took the polymer cover to melt.

Finally, Wallingford has testified that fuel tank straps should have been utilized along with increasing the Kia Soul's ground clearance.[82] According to Wallingford, fuel tank straps would have prevented the fuel tank from moving downward during an accident.[83] Plaintiffs' designated accident reconstructionist who developed this theory could not provide any testimony about how the tank was able to move down during the accident.[84] And Wallingford admitted during his deposition that he was unable to quantify how far the tank moved down.[85] Because Plaintiffs' experts do not know how the tank moved or how much it moved downward, it follows that Wallingford did not—and likely could not—conduct any testing to show how fuel tank

[78] *Id.* 111:24-25, at 99.
[79] *Id.* 160:22–161:7, at 118-19.
[80] *Id.* 166:18-21, at 121.
[81] *Id.* 111:23-25, at 99.
[82] *Id.* 156:21-25, at 114.
[83] Wallingford Report, Ex. C, App. at 80.
[84] *See, e.g.*, McCort Dep. 169:23-170:1-3, Ex. D, App. at 85-86.
[85] Wallingford Dep. 60:3-10, Ex. F, App. at 92.

straps, as opposed to the existing fuel tank attachment method, would have prevented the tank from moving down this unknown amount.[86]

Without testing, all Wallingford has done is identify various hypotheses.[87] Untested hypotheses, even if plausible, are insufficient to establish the availability of a "safer" alternative design under Texas law.[88] Therefore, Wallingford's untested hypotheses must be excluded as unreliable speculation.

D. Wallingford has established neither that his proposed fuel tank shield design was technologically feasible nor that any of his proposed "safer alternative designs" were economically feasible.

As stated previously, in order for an expert to tell the jury that a safer alternative design existed, he must first reliably establish that each "safer alternative design" element under Texas law. Consequently, through a valid scientific method based on sufficient facts and data, Wallingford must show that each of his proposed "safer alternative designs" were economically and technologically feasible at the time the subject Kia Soul was manufactured. Wallingford has strikingly failed to prove either element.

1. Wallingford has not reliably demonstrated that his proposed fuel tank shield design and his increased ground clearance proposal were technologically feasible.

Although Wallingford need not build a prototype of his proposed alternative designs, he must prove that the alternative designs were technologically feasible or "capable of being produced."[89] Wallingford stated in his report, "The use of a fuel tank shield would not have hindered the performance of the vehicle and was certainly feasible considering the widespread use of such shields on other vehicles in the automotive industry, including on similar types of

[86] *Id.* 111:23-25, at 99.
[87] *See Buck v. Ford*, 810 F. Supp. 2d 815, 825-26 (N.D. Ohio 2011).
[88] *See id.*
[89] *Casey*, 770 F.3d at 334(citing *Gen. Motors Corp. v. Sanchez*, 997 S.W.2d 584, 592 (Tex. 1999)).

cars."[90] Wallingford admitted during his deposition that none of the vehicles he examined had the shield he proposed in this case.[91] He further could not identify a single passenger car manufacturer who had a shield of the type he described.[92] Wallingford's unsupported assertion would not be enough for a reasonable jury to conclude that his proposed shield design was technologically feasible, so he should not be permitted to testify that a shield would have been a "safer alternative design."[93]

Wallingford also has offered no evidence that increasing the ground clearance of the Kia Soul by moving the fuel tank further up was technologically feasible. Wallingford has concluded that the fuel tank could have been moved *by approximately two to three and a quarter inches* into the space above the tank and below the floor pan.[94] First, raising the tank by this amount would create a tank-to-ground clearance of 10.4 inches.[95] During his deposition, Wallingford could not identify any passenger car with ground clearance of 8.4 or more inches.[96] Second, an examination of the space above the highest component of the tank assembly shows that if the fuel tank were moved up *even 0.8 inches*, it would already be in contact with the floor of the vehicle.[97] Consequently, Wallingford admitted that a "remodification of the floor pan" would be required in order for the fuel tank to be moved upward—but he did not explain this "remodification" any further. For example, he did not explain how and what components would need to be relocated or how the relocation would impact the vehicle's performance and safety.[98] Such design changes lack any clear description. But, in any event, how would changing the floor

[90] Wallingford Report, Ex. C, App. at 73.
[91] Wallingford Dep. 20:1-4, Ex. F, App. at 90.
[92] *Id.* 144:16-25, at 110; *Id.* 209:25-210:5, at 130-31.
[93] *Cf., e.g.*, *Casey*, 770 F.3d at 334
[94] Wallingford Dep. 81:5-10, Ex. F, App. at 94.
[95] *Id.* 90:9-10, at 95.
[96] *Id.* 157:2-5, at 115.
[97] Smith Report, Mar. 2, 2015, Ex. E, at 88.
[98] Wallingford Dep. 207:4-6, Ex. F, App. at 129.

pan and numerous other components between the floor pan and the tank affect the manufacturing process, durability, or other performance? Because Wallingford's opinion on moving the fuel tank is unsupported by evidence of its technological feasibility, it is unreliable and must be excluded.[99]

2. Wallingford has not proved that any of his proposed "safer alternative designs" were economically feasible.

To establish economic feasibility, Plaintiffs must introduce proof of the cost of implementing Wallingford's design change.[100] And to prove economic feasibility where the product is not yet in use, courts generally require a party to present evidence of either an estimate or range of the cost of the alternative design.[101] Wallingford has not provided *any* cost-analysis of his proposed designs.

First, Wallingford has offered no opinions regarding the effect on the cost of the vehicle that increasing the Kia Soul's ground clearance by "remodifying" the floor pan would have. Second, Wallingford has not provided any cost analysis of utilizing a metal access cover instead of a polymer one. Third, it appears that Wallingford is relying on the use fuel tank shields on other vehicles as proof of economic feasibility. As stated previously, Wallingford is unaware of any manufacturer who utilizes the fuel tank shield design he has proposed, so he must present evidence of either an estimate or range of the cost of his proposed fuel tank shield.[102] Thus, Wallingford has failed to prove that his alternative designs were economically feasible and, consequently, cannot reliably assert that his proposed designs qualify as "safer alternative designs" under Texas law.[103]

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[99] *Casey*, 770 F.3d at 334
[100] *See Casey*, 770 F.3d at 334
[101] *See Flynn v. Am. Honda Motor Co.*, No. 4:11-CV-3908, 2015 WL 75270, at *5 (S.D. Tex. Jan. 6, 2015) *reconsideration denied*, No. 4:11-CV-3908, 2015 WL 1461883 (S.D. Tex. Mar. 30, 2015).
[102] *See* Wallingford Dep. 209:25-210:5, Ex. F, App. at 130-31.
[103] *See Oglesby v. Gen. Motors Corp.*, 190 F.3d 244, 251 (4th Cir. 1999).

E. Wallingford has not conducted the required risk-utility analysis for his proposed alternative designs.

Even if the Court were to find that Wallingford established the other elements of a safer alternative design, his testimony would still not be admissible because Wallingford has not demonstrated that it would be feasible from the standpoint of overall safety. Kia cannot design its vehicles to account for only one particular type of accident; it must design vehicles to provide crash protection for as many people as feasible, taking into account as many kinds of potential accidents as feasible.[104] In other words, in designing the fuel storage system for this vehicle, Kia had to concern itself with the overall safety of its product.

Plaintiffs must, therefore, show that the safety benefits from Wallingford's proposed designs are foreseeably greater than the resulting costs, including any diminished usefulness or diminished safety.[105] Wallingford did not evaluate whether moving the fuel tank upward by "remodif[ying] the floor pan," adding a fuel tank shield, utilizing fuel tank straps, or using a metal access cover would diminish the usefulness or safety of the Kia Soul, and he has presented no evidence that any risks were outweighed by the utility of the alternative designs.[106] He has provided no underlying data that suggests that any of his proposed designs would have prevented Mr. Sims' injuries without substantially impairing the vehicles utility or safety in other types of accidents.[107] Without performing a risk-utility analysis, Wallingford cannot reliably testify that any of his proposals are, indeed, "safer alternative designs" under Texas law, so his testimony must be excluded.

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[104] *See Casey*, 770 F.3d at 333
[105] *See id.*
[106] *See id.*
[107] Tex. Civ. Prac. & Rem. Code § 82.005(b)(1).

III. Wallingford's crashworthiness opinion is unreliable because he has identified no specific defect and because his theory is not based on sufficient facts or data.

In Texas, crashworthiness cases involve a form of design defect.[108] The design defect can be anything that compromises the safety of the vehicle as a whole.[109] Crashworthiness cases differ from other design defect cases, however, because there is no causal connection between the defect and the accident.[110] The seller or manufacturer of the vehicle is liable only for those additional or enhanced injuries that would not have occurred but for the defect.[111] Thus, along with establishing the elements of a design defect claim, including the existence of a "safer alternative design," Plaintiffs must also prove that the specific design defect was a but-for cause of Plaintiffs' additional or enhanced injuries.[112]

In this case, Wallingford intends to offer testimony that because the doors could not be opened after the collision, the subject Kia Soul was not crashworthy.[113] Specifically, he alleges that the vehicle needed to be designed so that the occupants could have been removed through the rear doors of the vehicle.[114] Wallingford admitted, however, that he is not offering any opinions on the design of the doors in this case and that he has identified no specific defect in the doors, door latches, door surrounding structure, or any other part of the vehicle related to this issue.[115] Furthermore, Wallingford admits that he has no opinion as to how the vehicle, or any part of the vehicle, should have been designed differently in order not to have his supposed "crashworthiness" defect.[116] His testimony appears to be based solely on the existence of an

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[108] *Glyn-Jones v. Bridgestone/Firestone, Inc.*, 857 S.W.2d 640, 643 (Tex. App.—Dallas 1993), *writ granted* (Dec. 8, 1993), *aff'd and remanded*, 878 S.W.2d 132 (Tex. 1994).
[109] *Id.*
[110] *Id.*
[111] *Id.*
[112] *See id.*
[113] Wallingford Dep. 95:1-3, Ex. F, App. at 96.
[114] *Id.* 96:20-97:15, at 97-98.
[115] *Id.*
[116] *Id.*; *id.* 159:9-160:17, at 117-18.

alleged product failure, but in Texas, product failure standing alone is not proof of a product defect.[117] In reality, there was not product failure as it is undisputed that each of the three doors that did not open were directly damaged in the multiple impact crash. The door that was not impacted during the crash, the driver's door, did open after the crash. Because Wallingford does not have proof of—or even an opinion regarding—a specific product defect that enhanced Plaintiffs' alleged injuries, there is an analytical gap in his opinion, causing his crashworthiness opinion to be unreliable.

CONCLUSION

Wallingford has not satisfied the qualifications or reliability requirements established by the Supreme Court in *Daubert*, its progeny, or the Federal Rules of Evidence. Wallingford has merely set forth conclusions without any indication of how those conclusions were reached, and the conclusions he has presented are premised on nothing more than subjective believe and unsupported speculation. Consequently, entire expert testimony should be excluded.

[117] *Cf. Cooper Tire & Rubber Co. v. Mendez*, 204 S.W.3d 797, 807 (Tex. 2006).

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CERTIFICATE OF CONFERENCE

On April 29, 2015, counsel for Defendants conferred with counsel for Plaintiffs regarding this motion. Plaintiffs' counsel has represented that Plaintiffs are opposed to the relief requested herein.

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document has been forwarded to all known counsel of record in this cause in accordance with the Federal Rules of Civil Procedure on this 1st day of May, 2015.